



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,546	10/18/2004	Hiroshige Deguchi	52363-023	6507
20277	7590	10/15/2008	EXAMINER	
MCDERMOTT WILL & EMERY LLP 600 13TH STREET, N.W. WASHINGTON, DC 20005-3096			TURNER, KATHERINE ANN	
ART UNIT	PAPER NUMBER			
	1795			
MAIL DATE	DELIVERY MODE			
10/15/2008	PAPER			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/511,546	Applicant(s) DEGUCHI ET AL.
	Examiner Katherine Turner	Art Unit 1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 06/30/2008.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 3-5 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 3-5 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 18 October 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/0256/06)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application

6) Other: _____

FINAL ACTION

Response to Amendment

1. The amendment filed June 30, 2008 has been entered. Claims 3-5 are pending. Applicant cancelled claims 1-2.
2. One of the previous rejections for claims 1-5 under 35 U.S.C. 112, second paragraph, is withdrawn in light of Applicant's amendment, because claim 1 has been cancelled.

Specification

3. The disclosure is objected to because of the following informalities: a battery output is referred to as the external parameter, but the specified output of the redox flow battery is referred to as an internal parameter (page 21, lines 13-18). It is unclear if there are two different batteries supplying two different types of outputs. It is unclear why one output is an external parameter, while the other output is an internal parameter.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, for reasons of record.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Hasegawa et al. (US 2001/0012211), in view of Oga et al. (JP 2000-073932, cited in IDS, please refer to IPDL JPO machine translation for citation included in previous action) and Clarke et al. (WO 03/017407) for the reasons of record.

Response to Arguments

9. Applicant's arguments filed June 30, 2008 have been fully considered but they are not persuasive.

10. On page 3, Applicant argues that, by cancelling claims 1 and 2, the claims fully comport with the requirements of 35 U.S.C. 112. By cancelling claims 1 and 2 the rejections for claims 1 and 2 under 35 U.S.C. 112, second paragraph, are withdrawn. The rejection for claim 3 under 35 U.S.C. 112, second paragraph, still stands. Claim 3

describes two types of battery outputs; one is the "average value of output distribution of the redox flow battery for smoothing" and the other is a "specified output of battery." One cannot ascertain the metes and bounds of the claim, because it is unclear if there are two batteries providing the output. Applicant may want to amend to clarify if the specified output is from "the redox flow battery."

11. On pages 5-9, Applicant argues that Hasegawa et al. in view of Oga et al. and Clarke et al. do not disclose a technique for determining the optimum scale. Claim 3 contains limitations drawn to the scale of the rechargeable battery system of "number of batteries," and "number of DC/AC converters for converting the battery output." These limitations are optional and are not required to be met in order to meet claim 3, because they are preceded by the phrase "at least one of."

12. On pages 5-9, Applicant argues that Oga et al. does not cure the deficiencies of Hasegawa et al., because Oga et al. determines the output of a battery on the basis of the variation of wind power generator, rather than the variation of the required output of the redox flow battery itself. Applicant is arguing references individually, because Hasegawa et al. in view of Oga et al. and Clarke et al. teaches determining Hasegawa et al.'s current state (Applicant's battery output) on the basis of Hasegawa et al.'s optimum active power and reactive power, utilizing Oga et al.'s standard deviation calculations to determine the optimum active and reactive powers (Applicant's required output) of Clarke et al.'s redox flow battery (Hasegawa et al. [0013]; [0014]) (Oga et al. [0014]; [0015]; [0016]). Thus, Hasegawa et al. in view of Oga et al. and Clarke et al. utilizes the variation of the optimum active and reactive power (Applicant's required

output) of the battery itself to determine Hasegawa et al.'s current state (Applicant's specified battery output) of Clarke et al.'s redox flow battery.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

13. On page 9, Applicant argues "according to Oga et al., a designer cannot select how to stabilize or smoothen the variation in output of the wind power generator by the NaS battery. The designer is merely able to design a NaS battery based on a single factor, that is, the variation in output of the wind power generator. In short, the 'output of NaS battery' corresponds to the 'variation in the output of the wind power generator' only. Accordingly, a NaS battery suitable for practical use cannot be designed." Applicant is arguing references individually, because Hasegawa et al. in view of Oga et al. and Clarke et al. teaches determining Hasegawa et al.'s current state (Applicant's battery output) on the basis of Hasegawa et al.'s optimum active power and reactive power, utilizing Oga et al.'s standard deviation calculations to determine the optimum active and reactive powers (Applicant's required output) of Clarke et al.'s redox flow battery (Hasegawa et al. [0013]; [0014]) (Oga et al. [0014]; [0015]; [0016]). Thus, Hasegawa et al. in view of Oga et al. and Clarke et al. does not utilize the variation in output of the wind power generator alone, but utilizes the variation of the optimum active and reactive power (Applicant's required output) of the battery itself to determine

Hasegawa et al.'s current state (Applicant's specified battery output) of Clarke et al.'s redox flow battery.

14. On pages 9 and 10, Applicant argues that the present invention achieves superior remarkable results. If Applicant is intending figures A and B as its data for superior remarkable results, then Applicant is comparing present invention to Oga et al. alone. Hasegawa et al. in view of Oga et al. and Clarke et al. would produce data based on the output of an "RF battery" rather than that of the "output of wind power generator" utilized in figures A and B.

Applicant is arguing references individually, because Hasegawa et al. in view of Oga et al. and Clarke et al. teaches determining Hasegawa et al.'s current state (Applicant's battery output) on the basis of Hasegawa et al.'s optimum active power and reactive power, utilizing Oga et al.'s standard deviation calculations to determine the optimum active and reactive powers (Applicant's required output) of Clarke et al.'s redox flow battery (Hasegawa et al. [0013]; [0014]) (Oga et al. [0014]; [0015]; [0016]).

15. On pages 9-10, Applicant argues that Clarke et al. does not cure the deficiencies of Oga et al. and Hasegawa et al. because Clarke et al. does not "suggest which information should be obtained and considered to determine the optimum scale of the redox flow battery when the battery is combined to a power generator that is irregular and unsettled, such as a wind power generator." Applicant is arguing references individually, because Hasegawa et al. in view of Oga et al. and Clarke et al. teaches determining Hasegawa et al.'s current state (Applicant's battery output) on the basis of Hasegawa et al.'s optimum active power and reactive power, utilizing Oga et al.'s

standard deviation calculations to determine the optimum active and reactive powers (Applicant's required output) of Clarke et al.'s redox flow battery (Hasegawa et al. [0013]; [0014]) (Oga et al. [0014]; [0015]; [0016]). Thus, Hasegawa et al. in view of Oga et al. and Clarke et al. utilizes the variation of the optimum active and reactive power (Applicant's required output) of the battery itself to determine Hasegawa et al.'s current state (Applicant's specified battery output) of Clarke et al.'s redox flow battery, when the battery is combined to a power generator that is irregular and unsettled, such as a wind power generator.

16. On page 10, Applicant argues that "the Examiner has not provided any evidence that there would be any obvious benefit in making such a modification of Hasegawa et al."

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the prior office contained evidence to the obvious benefit in making the modification of Hasegawa et al. Hasegawa et al. taught of leveling the power fluctuation of wind power, an irregular power supply, due to weather conditions (like wind speed) (Hasegawa et al. [0005], lines 1-3; [0011]; [0012]), and Oga et al. taught that utilization of Oga et al.'s standard

deviation value would alleviate the concern about the irregular power supply (Oga et al. [0015]).

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence/Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine Turner whose telephone number is (571)270-5314. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Susy Tsang-Foster can be reached on (571)272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. T./
Examiner, Art Unit 1795

/SUSY N TSANG-FOSTER/
Supervisory Patent Examiner, Art Unit 1795